

ABSTRACT

Methods and apparatus are provided for measuring the position of an object. The apparatus comprises a magnetic sensor assembly having a magnetic field source, sensor and air gap, and a platen containing a region of position varying magnetic properties that moves through the air gap in response to movement of the object, thereby changing the magnetic field measured by the sensor. The measured magnetic field correlates with the object position. For angular position measurements, the region of position varying magnetic properties is desirably a substantially circular stripe whose magnetic thickness and/or magnetic area varies with angular location of the stripe in the air gap and hence the angular position of the object. Multiple air gaps and multiple stripes of varying magnetic properties may be provided to enhance measuring accuracy and convenience.